IN THE SPECIFICATION

Amendments to the Specification:

Please replace the paragraph beginning page 3, at line 12, with the following rewritten paragraph:

In such instances, an expander, which is essentially a repeater, is typically used to add another SCSI bus, which is then used to couple additional SCSI devices. Figure 2 illustrates a conventional I/O subsystem 200 that includes an expander 214 for connecting a pair of SCSI bus segments 208 and 210. In the I/O subsystem 200, a host computer 202 is coupled to the SCSI bus segment 208 via an SCSI host adapter 204. One or more SCSI devices 206 are coupled to the SCSI bus segment 208. Additionally, one or more SCSI devices 212 and a host computer 216 ~~202~~ are coupled to the SCSI bus segment 210 and the host computer 202 also includes an SCSI adapter for communicating with the SCSI bus segment 210. The expander 214 is coupled between the SCSI bus segments 208 and 210 to regenerate signals received on either SCSI bus segments 208 or 210 for transmission to the other SCSI bus segment. By so repeating signals, the expander 214 functions to extend the length of the overall SCSI bus so that additional SCSI devices 212, host computer 216, or other expanders can be attached to the SCSI bus segment 210.

Please replace the paragraph beginning Page 9, at line 17 with the following rewritten paragraph:

Figure 3 illustrates an exemplary I/O subsystem 300 that allows reset of individual bus segments 310, 312, and 314 ~~328, 330, and 332~~ using reset isolation in accordance with one embodiment of the present invention. The I/O subsystem 300 includes bus segments 310, 312, and 314, which include communication buses 330, 332, and 334, respectively. Each of the bus segments 310, 312, and 314 may include a set of devices such as host computers, peripheral devices, etc. In the illustrated embodiment, the bus segment 310 includes, in addition to bus 330, a host computer 302 and peripheral devices 316 and 318. The host computer 302 and the peripheral devices 316 and 318 are coupled to the bus 330 for communication. On the other hand, the bus segment 312 includes the bus 332 and peripheral devices 320 and 322 while the bus segment 314 includes the bus 334 and

peripheral devices 324, 326, and 328. The peripheral devices 320 and 322 are coupled to the bus 332 and the peripheral devices 324, 326, and 328 are coupled to the bus 334 for communication.

Please replace the paragraph beginning Page 10, at line 6 with the following rewritten paragraph:

To allow communication among the bus segments 310, 312, and 314, expanders 304 and 306 are provided to extend the length of a bus by propagating signals received from one bus segment to another bus segment. Specifically, the expander 304 is coupled between buses 330 and 332 to propagate (i.e., repeat) communication signals received from one bus to the other. Likewise, the expander 306 ~~304~~ is coupled between buses 332 and 334 for propagating signals received on one bus to the other. The expanders 304 and 306 thus allow the host computer 302 and the peripheral devices 316 to 328 to communicate signals in the I/O subsystem 300.

Please replace the paragraph beginning Page 10, at line 21 with the following rewritten paragraph:

With continuing reference to Figure 3, during operation of the I/O subsystem 300, a peripheral device in the I/O subsystem 300 may not function properly and "hang" the bus connected to the device. In an SCSI I/O subsystem, for example, the peripheral device 320 in bus segment 312 may malfunction and hang the bus 332 by asserting and continuing to assert "BSY" signal, which indicates that the bus is being used and thus is not available for other devices. The continued assertion of the BSY signal prevents the buses 330, 332, and 334 from entering BUS FREE state, which indicate that a bus is available for arbitration. Because the expanders 304 and 306 propagate all signals to bus segments 310 and 314 ~~334~~, the BSY signal will propagate to all the buses 330, 332, and 334. The propagated BSY signal prevents all devices including the host computer 302 and other properly operating peripheral devices from arbitrating for the bus. In so doing, all bus segments 330, 332, and 334 are hung and the operation of the entire I/O subsystem 300 comes to a standstill.

Please replace the paragraph beginning Page 12, at line 16 with the following rewritten paragraph:

The I/O interfaces 404 and 406 in the expander 304 provide interface to bus segments 310 and 312, respectively, for communicating SCSI data and control signals such as BSY, REQ, ACK, RST, etc. The I/O interface 404 is coupled between the SCSI bus 330 and the SCSI controller 402 and is adapted to drive input and output data and control signals between them. Similarly, the I/O interface 406 is coupled between the SCSI controller 402 ~~602~~ and SCSI bus 332 to drive input and output data and control signals therebetween.

Please replace the paragraph beginning Page 12, at line 23 with the following rewritten paragraph:

The I/O interfaces 404 and 406 include buffers (e.g., I/O cells) for driving signals on either side of the expander 304. For example, the I/O interface 404 includes a set of input buffers 410 and a set of output buffers 412 while the I/O interface 406 includes a set of input buffers 422 and a set of output buffers 420. Preferably, a pair of input and output buffers is provided for each SCSI bus line for driving signals in either direction. The input buffers 410 and 422 receive and drive communication signals from the buses 330 and 332, respectively, for transmission to the SCSI controller 402. On the other hand, the output buffers 412 and 420 are adapted to drive communication signals received from the SCSI controller 402 ~~602~~ for output onto the buses 330 and 332, respectively.

Please replace the paragraph beginning Page 14, at line 23 with the following rewritten paragraph:

The reset and segment isolation controller 408 is also arranged to generate a segment isolation signal ISOLATE for isolating bus segments 310 and 312 from one another. Specifically, the segment isolation signal ISOLATE is provided to disable the output buffers 412 and 422 in the I/O interfaces 404 and 406 so that all signals received on one bus segment is not propagated to the other bus segment. By preventing signal propagation between SCSI buses 330 and 332, the

expander 304 effectively isolates the bus segments 310 and 312. Segment isolation techniques are described in more detail in U.S. Patent Application No. 09/846,975, entitled "Expander Device and Method for Isolating Bus Segments in I/O Subsystem," which is ~~has been~~ incorporated by reference ~~above~~.

Please replace the paragraph beginning Page 16, at line 17 with the following rewritten paragraph:

After the bus segment 310 has been reset, the expander 304 enters, in operation 506, segment isolation mode to isolate bus segments 310 and 312 from one another. In this mode, all output buffers in the expander 304 are disabled so that no signal is output from the expander 304. The segment isolation serves to isolate segments from a segment where the device causing the bus hang condition is located. Without a segment isolation mode, the BSY signal will not clear if the device causing the bus hang condition is located in the far segments 332 or 334. The method moves to an operation 508 in which the ~~The~~ expander 304 on the bus segment 310 then exits segment isolation mode so ~~to~~ that the expander 304 can propagate data and control signals received from bus 330 to bus 332.

Please replace the paragraph beginning Page 17, at line 3 with the following rewritten paragraph:

After exiting the segment isolation mode, the host computer 302 on near-side segment selects the expander 304 to determine if the far-side bus 332 is in a BUS FREE state (i.e., not BSY) in operation 510 exemplified by decision 512. If the far-side bus 332 is still BSY, this means the device causing the bus hang condition is located in either bus segment 312 or 314 because the BSY signal on the bus 332 has not been cleared. In this case, the host computer 302 causes the expander 304 to issue a far-side reset signal to reset the far-side segment 312 in operation 514 in a manner similar to resetting the near-side segment 310. On the other hand, if the far-side bus 332 is not BSY, the device that caused the bus hang condition was in the near-side segment 310, which has already been reset. Thus, the bus hang condition has been cleared. It should be noted that the resetting and segment isolation operations continue one segment for other until a far-side bus is determined to be

in a BUS FREE state, at which time the expander exits reset isolation mode and the method terminates in operation 516.

Please replace the paragraph beginning Page 17, at line 16 with the following rewritten paragraph:

Figure 6 shows an exemplary flow chart 600 of a method implemented in the expander 304 for performing reset and segment isolation in accordance with one embodiment of the present invention. Initially, the expander 304 is idle in a reset isolation mode where it has reset itself and disabled output reset buffers 412A and 422A in response to a reset signal RST. If the reset signal is from the bus segment 310 ~~330~~, the expander 304 enters segment isolation mode in operation 606 by disabling output of signals received from one bus to the other. Then, it is determined if the other bus segment 330 is BSY in operation 610. If the far-side segment is not BSY, the expander 304 exits segment isolation mode in operation 618 and proceeds back to the idle mode in operation 602.